Abstract of the Disclosure

The invention is directed to a circuit arrangement for operating an exhaust-gas probe including a NOx double chamber sensor. The exhaust-gas probe includes: a heatable solid-state electrolyte body having first and second pump chambers and diffusion barriers for separating the chambers from each other and from the exhaust gas. A third chamber communicates with the atmosphere. An external pump electrode is exposed to the exhaust gas and a first oxygen pump electrode is disposed in the first pump chamber. A second oxygen pump electrode is disposed in at least one of the first and second pump chambers and a nitrogen oxide pump electrode is disposed in the second pump chamber. An air reference electrode is disposed in the third chamber. Only one pump voltage generating circuit unit is provided and a switching device switches the pump voltage generating circuit unit between respective ones of the pump electrodes. The pump voltage generating unit functions to generate, in a controlled manner, all of the voltages applied to the pump electrodes in dependence upon respective reference voltages.